Varun Jose Madanu

New York, NY ∘ +1 518-596-4160 ∘ varunjosemadanu@gmail.com ∘ [LinkedIn](#) ∘ [Portfolio](#)

EDUCATION

University at Albany, SUNY   New York, USA
Master of Science, Computer Science   08/2023 - 05/2025
Coursework: Algorithms and Data Structures, Software Engineering, Machine Learning, Database Systems

KPRIT Institute of Technology and Science   Hyderabad, India
Bachelors in Computer Science and Engineering   06/2019 - 06/2023
Coursework: OOPS using C++, Operating Systems, Network Security, Distributed Systems, Computer Vision.

PROFESSIONAL EXPERIENCE

NYS Department of Transportation   06/2024 - 03/2025
Data Analyst   Albany, NY, USA

- Optimized data management using Python for data manipulation and analysis, and SQL for precise querying, resulting in a 70% increase in report generation efficiency.
- Streamlined reporting processes using Python libraries and SAP Crystal Reports, cutting report generation time by 6 hours weekly and enabling faster decision-making across the pre-construction team.
- Spearheaded the creation of interactive Tableau dashboards, connecting diverse datasets from SQL databases and Python scripts, enabling pre-construction team to cut decision-making time by 3 hours per week.
- Played a key role in resolving data integrity issues within the Project PreConstruction database, conducting thorough data analysis and validation that led to timely fixes and improved report accuracy.

Cognier Insights   01/2023 - 06/2023
Software Engineer   Hyderabad, India

- Built a retail application that allowed consumers to access real-time stock availability and product placements within aisles, resulting in a 30% increase in customer satisfaction through enhanced shopping experiences and a 25% reduction in checkout processing time.
- Optimized application performance by systematically identifying and addressing bottlenecks, eliminated dependency on cloud gateways by establishing direct connections between the user interface and server using REST API protocols, leading to improved system reliability and a 20% reduction in latency.

Cognier Insights   09/2022 - 12/2022
Software Engineer Intern   Hyderabad, India

- Received an extensive 4-month training program encompassing React.js, Github, Agile foundations, MS SQL, performance tuning and resolve issues in production and development environments.

PROJECT EXPERIENCE

ExpenseNest | React.jS, AWS EC2, Docker, SpringBoot, Postman, Node.js

- Developed a user-friendly expense tracker application using React.js and Spring Boot, implementing JWT authentication, deploying on AWS EC2 with Docker, and employing version control systems, which can enable users to efficiently manage and monitor their personal finances.

Prediction Model for Obstructive Sleep Apnea from Facial Depth Maps | CNN, VGG - 19, Python, SGD, Tensorflow

- Enhanced and programmed a highly accurate prediction model for Obstructive Sleep Apnea using the VGG-19 deep learning neural network, achieving 98.6% accuracy by collecting and preprocessing 3D facial scan images for model training and inference.

Gentle Shop | React.js, Bootstrap, Tailwind CSS, Node.js, Express.js, MongoDB, Git, Postman

- Designed and deployed a scalable e-commerce application where users can shop products by category, add to cart, add to wish-list and check out features, featuring a React front-end and an Express/MongoDB back-end, implementing JWT authentication for secure user sessions, achieving a 30% improvement in user session efficiency, showcasing expertise in full-stack development and cloud deployment.

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, SQL, C, C++, HTML, CSS, XML, Java
Web Development & DB : Bootstrap, React.js, Node.js, MySQL, MS Access, Express, Spring Boot, MongoDB, PostgreSQL
Technologies & Tools: Tableau, AWS, Docker, Git, GitHub, Jira, Google Cloud Platform, Selenium IDE
Python Libraries: NumPy, Pandas, Scikit, Keras, Matplotlib, PyTorch, Tensorflow, Flask, SciPy
Soft Skills: Integrity, Agile, Problem Solving, Team Collaboration, Communication, Adaptability, Critical Thinking

ACHIEVEMENTS:

- Engineered a predictive model for Obstructive Sleep Apnea as final college project, earning 'Best Project' award; model achieved 95% accuracy, increasing diagnosis rate.
- Received an award for "Gentle Shop" project in the college hackathon for high performance web application.